

GENDER DIFFERENCE IN TEMPERAMENTAL DIMENSIONS OF CHILDREN

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Key words : Gender, temperament, children

Temperament is the core element of human's personality. Child's temperament might be involved in the child's social relationship and affect his or her social development. This study aims to investigate gender differences in temperamental dimensions of children. From Hisar city, two schools affiliated to CBSE and two schools affiliated to HBSE were selected at random. From each school 40 children were randomly selected. Total sample comprised 160 children (84 boys and 76 girls). Malhotra Temperament Schedule (Malhotra and Malhotra, 1988) was used to assess mothers' perception of their children's temperament. Results revealed that temperamentally boys were more energetic than girls.

INTRODUCTION

Temperament refers to relatively consistent, basic dispositions inherent in a person that underlie and modulate the expression of activity, reactivity, emotionality and sociability (Goldsmith *et al.*, 1987). Thomas and Chess (1977) identified nine main dimensions of temperament which encompass those described by Goldsmith *et al.* (1987). These are the activity level of the child, the regularity of bodily functioning including sleep, hunger and bowel movements, adaptability to changes in routine, response to new situations, level of sensory threshold to produce a response to external stimulation, the general degree of distractibility and the degree of persistence and attention span. On the basis of a profile on these dimensions, a child can be described by certain temperamental styles as easy, difficult or slow-to-warm-up.

A child with difficult temperament is likely to evoke feeling of frustration and irritation. On the other hand, child with easy temperament is more likely to evoke positive feeling. The behaviour disorders in children cannot be explained by temperament alone; it requires consideration for interplay of temperament and environment. When child's temperamental characteristics are such that he or she is able to master the expectations of the environment then this interplay of child and environment promotes normal development.

Inhibition, difficult temperament or high activity level can result in isolation of the child by the peer group. Once isolated, the child may be precluded from the possibilities of establishing normal social relationships, experience of normal social interactive play behaviours and the development of those social and cognitive skills which are encouraged by peer relationships and social play (Rubin and Krasnor, 1992).

Researches indicate that temperamental dimensions are related to cognitive style in children. Goldstein *et al.* (1986) found that children who were distractible, non-persistent, non-adaptable, highly active and negative in mood were more likely to be impulsive in problem solving tasks. On the contrary, children who were non-distractible, more persistent, positive in mood, easy to adapt and mildly active tended to be more

reflective, and took their own time to solve their interpersonal problems. The main objective of this project is to investigate gender differences in temperamental dimensions of children.

Methodology :

The present study was conducted purposively in Hisar city. From Hisar, on the basis of information provided by education department, two schools affiliated to CBSE and two schools affiliated to HBSE were selected at random. From each school 40 children were randomly selected. Thus, a total of 160 children were selected from four schools irrespective of sex. Of these 160 children, 84 were boys and 76 were girls. Mothers of these children also participated in the present study.

Children were divided into three categories-low, intermediate and high categories of different temperamental dimensions on the basis of obtained scores in different dimensions of temperament. High sociability indicates that the child is quite responsive to the environment, adjustable, adaptable and uninhibited. For emotionality dimension of temperament, high in emotionality indicates that the child is positive and happy in mood. High in energy dimension indicates that child exhibits high physical and psychological energy. High distractibility describes that the child is highly distractible. High on rhythmicity dimension indicates that the child is regular and predictable in biological functions.

Results : As depicted in Table 1, sociability dimension of temperament varied greatly; 22.5% children fell in low category, 46.9% in intermediate category and 30.6% in high category. Majority of children (76.9%) belonged to high category of emotionality, followed by intermediate (18.1 %) and low (5%). Fifty three percent of children fell in intermediate category of energy dimension of temperament, followed by low (38.1%) and high (8.8%) category. In distractibility dimension of temperament, fifty children (31.2%) fell in high category, 6.9% in low category and 61.9% in intermediate category. 60% of children fell in high category of rhythmicity dimension, followed by intermediate (38.1 %) and very low percentage (1.9%) in low category.

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TABLE-1
Frequency distribution of children in different categories of temperamental dimensions

n= 160

Temperamental dimensions	Categories of temperamental dimensions		High
	Low	Intermediate	
Sociability	36 (22.5)	75 (46.9)	49 (30.6)
Emotionality	8 (5.0)	29(18.1)	123 (76.9)
Energy	61 (38.1)	85 (53.1)	14 (8.8)
Distractibility	11 (6.9)	99 (61.9)	50 (31.2)
Rhythmicity	3 (1.9)	61 (38.1)	96 (60.0)

N.B.- Figures in parentheses indicate percentages.

These results indicate that about fifty percent of children fell in intermediate category of sociability and energy. Majority of children belonged to high category of emotionality and rhythmicity. About sixty percent of children belonged to intermediate category of distractibility.

2. Association between sex of child and temperament

It is evident from **Table 2** that no association was found between sex of child and sociability dimension of temperament, χ^2 (df = 2) = 0.20, $p < .05$; emotionality, χ^2 (df = 2) = 0.97, $p < .05$; distractibility, χ^2 (df = 2) = 1.65, $p < .05$ and rhythmicity, χ^2 (df = 2) = 2.99, $p > .05$ respectively.

Significant association was found between sex of the child and energy dimension of temperament, χ^2 (df = 2) = 8.95, $p < .05$.

As presented in **Table 2**, 48.7 percent of the girls fell in low category of energy dimension as compared to boys (28.6%); whereas, 58.3% of boys fell in intermediate category and 13.1 % fell in high category of energy dimension of temperament. On the other hand, percentages of girls were low as compared to boys for intermediate category (47.4%) and high category (3.9%). Thus, the results indicate that boys are more energetic than girls.

It can be interpreted from these results that energy aspect of temperament was associated with sex of children, boys being more energetic than girls. Other aspects of temperament were not found to be associated with the sex of child.

TABLE-2 :Association between sex of child and temperamental dimensions

Temperamental dimension	Categories	Sex of child		
		Boys n=84	Girls n=76	χ^2 value
Sociability	Low	19 (22.6)	17 (22.4)	0.20
	Intermediate	39 (46.4)	36 (47.4)	
	High	26 (31.0)	23 (30.2)	
Emotionality	Low	5 (6.0)	3 (3.9)	0.97
	Intermediate	17 (20.2)	12 (15.8)	
	High	62 (73.8)	61 (80.3)	
Energy	Low	24 (28.6)	37 (48.7)	8.95*
	Intermediate	49 (58.3)	36 (47.4)	
	High	11 (13.1)	3 (3.9)	
Distractibility	Low	4 (4.7)	7 (9.2)	1.65
	Intermediate	55 (65.5)	44 (57.9)	
	High	25 (29.8)	25 (32.9)	
Rhythmicity	Low	3 (3.6)	0 (0.0)	2.99
	Intermediate	30 (35.7)	31 (40.8)	
	High	51 (60.7)	45 (59.2)	

Note: Figures in parentheses indicate percentages; *Significant at 5% level.

3. Comparison of temperament of boys and girls

As shown in **Table 3** significant differences were found for energy dimension of temperament, $Z=3.78^*$, $p < .05$.

Boys were more energetic ($\bar{X} = 6.74$) as compared to girls ($\bar{X} = 6.33$).

TABLE-3 : Comparison of children's temperament on the basis of sex of child

Temperamental dimension	Sex of child		'Z'- values
	Boys (n=84) Means \pm SD	Girls (n=84) Means \pm SD	
Sociability	11.62 \pm 1.45	11.58 \pm 1.47	0.18
Emotionality	6.15 \pm 0.76	6.16 \pm 0.59	0.10
Energy	6.74 \pm 0.74	6.33 \pm 0.62	3.78*
Distractability	3.16 \pm 0.30	3.13 \pm 0.36	0.53
Rhythmicity	3.53 \pm 0.42	3.54 \pm 0.36	0.41

Note: * Means differ significantly in the same row at 5% level.

There were no significant differences for sociability, emotionality, distractibility and rhythmicity temperamental dimensions of boys and girls. The mean scores for different temperamental dimensions of boys were 11.62 for sociability, 6.15 for emotionality, 3.16 for distractibility and 3.53 for rhythmicity, whereas for girls the mean scores for sociability, emotionality distractibility and rhythmicity were 11.58, 6.16, 3.13 and 3.54 respectively. It can be interpreted from these findings that boys were more energetic than girls.

Discussion : Results of the present study revealed that mean scores of selected children were similar to standard mean scores given by Malhotra and Malhotra (1988). Results indicated that about fifty percent of children fell in intermediate category of sociability and energy and majority of children belonged to high category of emotionality and rhythmicity. These are indicators of easy temperamental style. Malhotra and Malhotra (1988) also reported similar findings. These findings also get support from Balda *et al.* (2009). These authors found that majority of boys and girls fell in the easy temperamental style.

Significant differences were found in sexwise energy dimensions of temperament. Boys were more energetic than girls. Thus, it may be concluded that mothers perceive boys' and girls' in different manners. There were no significant differences in mean values for sociability, emotionality, attentivity and rhythmicity dimensions of boys and girls. These findings get substantiated by those of Malhotra and Malhotra (1988). They also found that boys were more energetic than girls. Energy dimension of temperament included physical and psychological energy, i.e., activity and intensity level.

Results of the sex-based energy dimension also support from previous literatures; Buss (1989) also indicated that boys were more active than girls and girls were more fearful than boys. Kohnstamm (1989) and Prior *et al.* (1989) also reported that boys were more active than girls. In another study, Prior *et al.* (2000) also reported that boys were more aggressive and hyperactive than girls. Else-Quest *et al.* (2006) used meta-analytical techniques to estimate the magnitude of gender differences in mean level and variability of 35 dimensions

and 3 factors of temperament in children aged 3 months to 13 years. These authors also observed gender differences in temperament and reported that boys were more active than girls. In another study, Oren (2006) also examined relationships between temperament and gender of child and obtained similar results. Walker *et al.* (2001) also investigated the relation between sex and temperament of preschool-aged children. Teachers' rated children's temperament was used. Boys were rated as more active, more distractible and less persistent than girls. de Boo and Kolk (2007) also reported gender differences in temperament of 9-13 years old children. Balda *et al.* (2009) conducted a study with preschool children and found that boys were more active and less withdrawn as compared to girls.

Conclusion :

From the above results and discussion, it can be concluded that about fifty percent of children fall in intermediate category of sociability and energy. Majority of children belonged to high category of emotionality and rhythmicity. About 60% of children belonged to intermediate category of distractibility. Majority of children had easy temperament. Significant sex differences were found for energy dimension of temperament. Boys were more energetic than girls. There were no significant differences in mean values for sociability, emotionality, attentivity and rhythmicity dimensions of boys and girls. Further results indicate that significant association was found between sex of the child and energy dimension of temperament.

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